

HYDROGEN FUELED SPARK IGNITION ENGINE

Abstract

A hydrogen fueled reciprocating spark ignition engine includes a fuel system for providing gaseous hydrogen to the cylinders of the engine and a lean NO_x trap coupled to the engine for treating the engine's exhaust. An EGR system provides recirculated exhaust gas to the engine, and a controller operates the fuel system and EGR system during periodic purging of the lean NO_x trap such that the engine is operated fuel rich, with the mass of EGR approximating 40%–80% of the mass of air and fuel.